Dr. Supreet Singh

Department of Electronics and Comm Engg.

Baba Banda Singh Bahadur Engineering College,

Fatehgarh Sahib, Punjab- 140407

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Objective:

Self-Motivated to contribute in the field of wireless technology driven by innovation and continuous learning through research.

EDUCATION PROFILE

Qualification	Year of Passing	University	Specialization
Ph.D	2017	Thapar University, Patiala	Wireless Technology, Green Energy Harvesting
M.Tech	2010	Guru Nanak Dev Engineering College, Ludhiana.	Electronics and Communication Engineering
B.Tech (Hons.)	2005	Punjab Technical University	Electronics and Communication Engineering

TEACHING AND RESEARCH EXPERIENCE –

12 years (Regular) + 1.5 year (On Contract)

WORK PROFILE

- *July 2016 – Till Date,* Assistant Professor (Senior Scale AGP- 7000/-), BBSB Engineering College, Fatehgarh Sahib.

- *July 2007 - Jun 2016* Assistant Professor (AGP 6000/-), BBSB Engineering College, Fatehgarh Sahib.
- *Jan 2006, - Jun 2007, Lecturer* (On contract) BBSB Engineering College, Fatehgarh Sahib.
- *July 2005 - Jan 2006 -* Service Engineer, Wipro GE Medical Services, Chandigarh.

Subjects Taught:

At PG Level:

Neural Networks and Fuzzy logic, Multimedia Communication systems, Internetworking protocols, Reliability of Electronics Communication Systems.

At UG Level:

Object Oriented Programming, Digital Electronics, Wireless Communication, Digital Communication system, Electromagnetic and antenna wave Propagation,

Areas of Interest:

Wireless communication, Cognitive Radios, Dynamic Spectrum Access, Programming, RF/Green Energy Harvesting

Membership:

Member IEEE membership no. – 93966616,

Life Member IE (I) – M-160205-5,

Life Member ISTE - LM-124670

Awards and Honors:

- Green ThinkerZ Bright Researcher Award 2017.

M.Tech Thesis Guided: 12

Details

Projects:

Working as a team member under the project "Unnat Bharat Abhiyan"

Consultancy Work done:

- *Project "Soil Supra" in collaboration with CSIO, Chandigarh, 2008.*
- Embedded Programming of "Automated Liquid media dispensing System", a big robotic arm, AEID, CSIO, 2006.

Workshops Conducted:

- (As Coordinator) one week All India National Workshop on **"Advanced Wireless Communication and its Implications"** sponsored by Institution of Engineers (India) from 10th Sept.- 15th Sept., 2018

Expert Lectures Delivered

1. Delivered an expert lecture at NITTTR, Chandigarh in the two weeks (16-09-2013 to 27-09-2013) STC "Embedded Systems and its applications" dated 18-09-2013 and 19-09-2013

2. Delivered an expert lecture at NITTTR, Chandigarh in STC "FPGA and its Applications" dated 18-04-2014 and 19-04-2014

3. Delivered an expert lecture at *Govt. Polytechnic College, Khuni MAJRA, Mohali* on 25th Aug, 26th Aug and 28th Aug, 2014 in STC on "Introduction to Embedded Systems" one week STC from 25th – 29th Aug, 2014 (Discussed ARM , Andriod, NGN, Basics, Practical 8051 problems, projects).

4. Delivered an expert Lecture at NITTTR, Chandigarh in STC (16th Aug- 21st Aug, 2015) "FPGA and its advanced Applications" dated: 21st Aug, 2015 (Discussed Future Perspectives of FPGAs)

5. Expert Lectures delivered at ICT course *(video recorded)* on "8051 Processors and Microcontrollers" at TV Studio at NITTTR, Chandigarh, Jan, 2015.

6. Expert Lectures delivered at ICT course *(video recorded)* on "ARM processors and Programming" at TV Studio at NITTTR, Chandigarh, 2015

7. Delivered an expert lecture at NITTTR, Chandigarh in ICT based STC "Android Platform in Embedded Systems" on 8th Feb, 2016.

8. Guest Faculty at NITTTR for Modular M.Tech (ECE) for 2010, 2011 and 2012.

9. Delivered a Lecture on ASIC 2012 at NITTTR

10. Delivered a lecture on Embedded ARM processors and ASIC in 2012

11. Delivered a lecture on Electronic System Design (FSM) in 2011.

Short Term Courses/Seminars Attended:

1. Attended one week AICTE/ISTE Induction/Refresher Program on **"Mobile Application Development"** at BBSB Engineering College, Fatehgarh Sahib from 9th – 14th July, 2018.

2. Attended one day workshop on "Mathematical Modelling and optimization of systems" at BBSBEC, Fatehgarh Sahib on April 20, 2018 sponsored by IE (I).

3. Attended 3 weeks Research and Mathematical modelling Session EE Deptt at **IIT Delhi** during Winter Vacations Dec 2016.

4. Attended two months Summer Faculty Research Fellowship (SFRF-2016) at *IIT, Delhi* from May – July, 2016.

5. One Week STC/Workshop on "Human Values and Professional Ethics" attended at ACET, Mannawala, Amritsar organized by PTU, Jalandhar, from 15th Jun-21st Jun, 2015

6. Attended One week Faculty Development Programme on "MATLAB and its Applications & Implementation of Wireless Networks in FPGA/CPLD" from 2nd July – 6th July, 2012.

7. Two Weeks STC on "Basic Electronics" at NIT, Kurukshetra organized *by **IIT Bombay*** under NMEICT 28th June – 8th July, 2011.

8. One week STC on "Network Security" at BBSBEC, Fatehgarh Sahib 19th - 25th July, 2010.

9. Attended three day Faculty Development progamme (FDP) on "Emotional Intelligence for Organization Excellence" conducted by PTU on 12-7-2010 and 14-07-2010 at BBSBEC.

10. Attended two days Faculty Development progamme (FDP) on "Human Values" conducted by PTU on 16-7-2010 and 17-07-2010

11. Two day Workshop on "Effective Teaching Skills", BBSB Engg. College, Fatehgarh Sahib, 19-20 July, 2006.

12. One Week STC on "DSP using MATLAB" at NITTTR, Chandigarh from July 31- Aug 4, 2006

Paper Publication in Reputed SCI Journals:

1. Supreet Singh, Sudhakar Modem and Shankar Prakriya, "Optimization of Cognitive Two-Way Networks With Energy Harvesting Relays," in *IEEE Communications Letters*, Vol. 21, No. 6, pp. 1381-1384, June 2017, ISSN: 1089-7798. (IF – 2.72)

2. Supreet Singh, Surbhi Sharma, "Performance Optimization of RF Energy Harvesting Relay-based Interweave/Underlay Cognitive Radio Network", *International journal of Electronics, Taylor & Francis,* Vol. 104, No. 9, pp. 1546-1561, 2017 , Print ISSN: 0020-7217 Online ISSN: 1362-3060 (SCI Indexed) IF = 0.939

3. Supreet Singh, Surbhi Sharma, " A Joint SMSE waveform design and blind cyclostationary spectrum sensing for cognitive radios", **Iranian journal of Science and Technology, Transactions of electrical Engineering (Springer),** Vol. 41, Issue 2, July, 2017, pp- 93-101 **ISSN**: 2228-6179 (print version) **ISSN**: 2364-1827 (**electronic** version) (SCI Indexed) IF = 0.60

4. Supreet Singh, Surbhi Sharma, "Performance Analysis of Spectrum sensing Techniques over TWDP fading channels for CR based IoTs", **AEU - International Journal of Electronics and Communications,** Elsevier, Vol. 80, Issue 10, pp. – 210-217, 2017. ISSN 1434-8411, (SCI IF = 2.853)

International/National Conference Publications:

1. Supreet Singh, MIEEE, "Performance Analysis of Energy Harvesting based Two-way multi-relay wireless network", **28th International Telecommunication and Networking Applications Conference (IEEE-ITNAC 2018) at University of New South Wales, Sydney, Australia, 21st-23rd Nov, 2018**, pp 16-21. (Attended Conference and Presented) – Supported by ITS program by SERB, Under DST, Govt. of India

2. Radha Rani, Supreet Singh, "Performance Analysis of SDR based Wireless Relay Networks", **IEEE International Conference on Computational Intelligence and Communication Networks (IEEE CICN-2018),** Aalborg University Campus, Esbjerg, Denmark, 17th – 19th August, 2018, pp. 15-19.

3. Jatinder pal Singh, Supreet Singh, "Implementation of OFDM and Multi-Carrier Modulations on SDR-experimental work", **IEEE International Conference SCOPES-2016** (3rd – 5th Oct, 2016), pp -1937-1940

4. Jatinder pal Singh, Supreet Singh, "Review of 4G and Comparative with other cellular techonologies", National Conference on Advances on Electrical and Electronics Communication Engineering (AEECE- 2015) on Feb, 20-21, 2015, pp- D59-D61.

5. Rohit Kumar, Karamjeet Singh, Supreet Singh, "Implementation of feature based detection in Cognitive Wireless networks", at National Conference on Advances on Electrical and Electronics Communication Engineering (AEECE- 2015) on Feb, 20-21, 2015

6. Rajni Sindwani, Supreet Singh, "Implementation and comparative analysis of wireless techniques in 4G and 5G communication systems", International Journal of Engineering Technology Science and Research, (IJETSR – peer reviewed), Vol 2, Issue 8, August 2015.

7. Sadhna, Supreet Singh, "Hybrid Protocol based on HBO and ACO for routing in Wireless Sensor Network", International Journal of Electronics and Electrical Engineering, IJEEE (blind-reviewed), Vol 1, Issue 2, April 2014.

8. Abhishek Saini, Supreet Singh, "Comparative Analysis of Bit Error Rate and Outage Capacity for MIMO Space Time Trellis Coding", International Journal on Recent and Innovation Trends in Computing and Communication (IJRITCC), Volume: 2 Issue: 11, Nov 2014, pp-3398 – 3401. ISSN: 2321-8169

9. Sadhna, Supreet Singh, "Chain based WSN using hybrid optimization", IJEEE, Vol 1, Issue 1, pp-23-25, March 2014, ISSN- 1694-2310 (online).

10. Virinderpal Singh, Supreet Singh, "Implementation and Analysis of Different Equalizers using SIC and V-BLAST Architecture for MIMO systems", International Journal of recent and Innovation Trends in Computing and Communication (IJRITCC), Vol 2, Issue 11, Nov, 2014, pp 3742-3745, ISSN 2321-8169

11. Amarjit Kaur, Supreet Singh, "Analysis of Digital Watermarking using full counter propagation neural networks and Hopfield Model" International Journal of Computational Engineering and Management (IJCEM), Vol 16, Issue 3, May 2013, pp-77-80, ISSN (online): 2230-7893

12. Amarjit Kaur, Supreet Singh, "Performance Analysis of Digital Watermarking using counter propagation neural networks", International Journal of Engineering Research & Technology (IJERT), Vol 2, Issue 6, pp-208-212, June 2013, ISSN: 2278-0181

13. Preeti Gupta and Supreet Singh, "Night Image Optimization using Hybrid Model of High and Low Intensity images", International Journal of Emerging Technology and Advanced Engineering (IJETAE), Vol 2, No. 6, pp 433-435, 2012, ISSN: 2250–2459 (Online).

14. Honey Dhingra, Supreet Singh, "Enhancement of DES using CHAOS Theory", at International Conference on Advancement in Computing and Communication, (ICACC-2012) BBSBEC, Fatehgarh Sahib, Feb 23-25, 2012, pp 28-31.

15. Anita Kumari, Supreet Singh, "Analysis of travelling Salesman Problem using Ant Colony Optimization, genetic algorithm and Hybrid", International Journal of Engineering Research & Technology (IJERT), Vol 2, Issue 7, July 2013, ISSN: 2278-0181

16. Supreet Singh, Munish Saini, Harpreet Singh, "Review of Apriori Algorithm for finding Association Rules' at ICACC-2012, BBSBEC, Fatehgarh Sahib, Feb 23-25, 2012.

17. Supreet Singh, Amrit kaur, Kiranpreet Kaur, " "ZCC Codes Implementation for Optical CDMA Applications"; at National Conference "CCC -09 " at PUNJAB University, Chandigarh on 23rd - 25th Oct, 2009 .

18. Supreet Singh, S.S. Gill, J P S Raina, " "KL - Partitioning Algorithm Implementation in MATLAB"; at International Conference on Wireless Networks and Embedded Systems "WECON -2009 " Chitkara Institute of Engineering And Technology, Rajpura, 23rd – 24th Oct, 2009, Vol 2 , pp 216-220.

19. Supreet Singh, S.S. Gill & Jaspreet Kaur, "Initial Partitioning Algorithm for ISPD98 Benchmark", International Journal of Electronics Engineering, Vol 1, No. 2, 2009, pp-285-289, ISSN – 0973-7383.

20. Supreet Singh, J P S Raina, "Next Generation Networking - NGN" ; at International Conference " WECON -2008" Chitkara Institute of Engineering And Technology, Rajpura, 2008 .

21. Supreet Singh, Amanpreet Kaur "AJAX Technology - A future web Service" at National Conference "ADVICE - 2008" NITTTR, Chandigarh April 6-7, 2008.

22. Supreet Singh, "Nanotechnology - The next Industrial Revolution" at National Conference "INNOVATIONS - 2007 " BBSBEC, Fatehgarh Sahib (pp 197-206) April 6-7, 2007.

23. Supreet Singh, "Wi-Max Technology- The next Wireless Revolution" at National Conference NCCSIT-06, organized by Department of CSE & IT, BBSB Engineering College, Fatehgarh Sahib.

Other Tasks and Additional Responsibilities:

- Chaired a Conference Session (S15) on 23rd Nov, 2018 at International Conference IEEE ITNAC-2018 at *University of New South Wales, Sydney,* Australia.
- Invited Reviewer of IEEE WCL and IEEE access Journals.
- Invited Reviewer of IEEE International conferences and Taylor &Francis (SCI Journals)
- Working for Unnat Bharat Abhiyan (UBA) Project
- UG Project Co-ordinator (for July- Dec 2018 and Jan-Dec 2019)
- Center Superintendent for MRSPTU University Examination (MAY-2018).
- Paper setter for different universities. (Under-Graduate and Post-Graduate).
- Review of papers of international conferences held in various countries.
- Spoken Tutorials Coordinator for ECE Deptt. BBSBEC (July-Nov 2017)
- Website Coordinator for Departmental Website.
- Organized and coordinated Expert Talk on IoTs (Resource Person- Mr. Krenal Chauhan) on 9th March 2017
- Prepared M.Tech (ECE) LAB-I syllabus and designed MATLAB experiments and LAB manual.
- Performed Observer duty in IKJPTU external examination (DEC-2013).
- Convocation Stage management Committee member
- PTU Youth Festival Musical Events Committee member
- Performed Deputy Supdt. duty in IKJPTU University Examination (MAY-2014).
- Lab Incharge for Project LAB, Microwave LAB
- Guided projects at under-graduate level, Post Graduate Level.
- Prepared Mission, Vision and PEOs of the department (Blueprint).

- Head Examiner (ECE) for observing Evaluation Process (ECE) of IKJPTU Examination for end semester Dec 2017 – Jan 2018 and Dec-2018 to July 2019.
- ERP co-ordinator of ECE during semester Jan-May 2018
- Conducted (Co-ordinator) 3-day "Student Personality Development Camp" from 23rd-25th Feb, 2018 in collaboration with Guru Gobind Singh Study Circle.

PERSONAL PROFILE

AGE   : 35 years

LANGUAGES KNOWN   : English, Punjabi, Hindi.

CORRESPONDENCE ADDRESS   : #C-101, Staff Residence Colony, BBSB Engineering College, Fatehgarh Sahib- 140407 (Punjab)

PERMANENT ADDRESS   : #8851, Street no. 4, Kot Baba Deep Singh, Amritsar.

EXTRA ACTIVITIES   : Playing Badminton, Chess, Reading Books.

Date: 1-05-2019   **Supreet Singh**

Place: Fatehgarh Sahib (Punjab)